



TREE-WOUND DRESSINGS

1. Asphalt--paint dressing: 837980

Asphalt paint may be used as a tree-wound dressing. It is readily obtainable at most paint stores. It sticks well to dry wood surfaces, but does not adhere satisfactorily to wet wood. On certain species of trees, wound healing is stimulated by some asphalt paints. Asphalt paints have good lasting quality. Intact paint surfaces are often found beneath completely callused wounds of trees making normal growth. However, before callus growth has completely covered the surface of large wounds, particularly on tree trunks, the paint film may crack or chip away from the surface. In such cases the wound should be repainted.

The asphalt is commonly cut with mineral oil. The paint may be made thick or thin by varying the relative amounts of asphalt and mineral oil in the mixture or by the incorporation of asbestos, ground slate, or other additive substances. In cold weather very stiff asphalt paints are hard to apply. The thinner, more brushable mixtures adhere well and have good lasting quality. A water emulsion of asphalt may also be used as a tree-wound paint.

It is not advisable to include creosote in asphalt tree-wound paint, because the creosote may injure the cambium and cause an enlargement of the wound or may retard healing. However, the use of an antiseptic paint probably will reduce the danger of spreading tree diseases in pruning work. Paint made from gilsonite, a natural asphalt, can be made antiseptic by mixing into it 0.2 percent phenylmercury nitrate. This antiseptic paint should be used when wounds on London plane trees are painted in an area where killing disease called cankerstain occurs.

Phenylmercury nitrate is a highly toxic chemical and must be handled with caution. However, a careful workman can safely mix it with the asphalt varnish by first mulling the fine powder in a small quantity of linseed oil and then thoroughly stirring it into the varnish. Some people are very sensitive to mercurials carried in oils. Anyone using paint fortified with phenylmercury nitrate in this concentration should wipe away at once all spots that make contact with the skin. Phenylmercury nitrate should not be added to asphalt paints made from petroleum residue asphalt, but can be added to gilsonite, a natural asphalt. (The foregoing statement on asphalt paint was prepared by Dr. Curtis May, Division of Plant Pathology, ARA-PISAE, U. S. Department of Agriculture, Beltsville, Md.)

2. Lanolin dressing:

Lanolin and certain mixtures having lanolin as a base are highly effective as dressings for tree wounds according to studies made by the U. S. Forest Service at the Agricultural Research Center, Beltsville, Md. The action of lanolin is to prevent drying, checking, and dieback from the wound edges; with protection from drying, callus growth is initiated promptly and the incidence of infection is reduced. Although lanolin dressings have been tested only on small wounds 2 to 4 inches wide, similar benefits could be expected on larger wounds. Lanolin has no known antiseptic properties. On larger wounds, painting with shellac before applying the dressing is



advisable as an additional preventive against infection. Ordinarily, lanolin dressings are not much subject to blistering except on profusely bleeding species such as the maples, and on those the trouble is not often serious except during the spring season.

Straight, technical-grade, anhydrous lanolin is a soft solid at room temperatures, but will melt and run on hot summer days, especially if exposed to the sun. A mixture prepared by melting together 4 parts rosin with 10 parts lanolin withstands high summer temperatures better, and possesses better physical properties as a dressing. The rosin mixture is tougher and more pliable; as the configuration of the wound changes with development of callus, the mixture will yield much more without rupture than will lanolin alone. If required because of unusual temperature conditions, viscosity of the mixture can be increased by adding beeswax or decreased by adding crude pine gum.

Lanolin dressings may be applied with a limber spatula or putty knife, or better with the fingers. Smear the material thoroughly around and over the edges of the wound and cover the wound face with a coating one-eighth to one-quarter inch thick. The dressing will be uneven and tacky at first, but after a few warm days, it tends to smooth out and form a firm surface film. Unless loosened by profuse bleeding or infection of the wound, lanolin coatings so applied often will persist with little apparent deterioration until pushed out or overgrown by the expanding callus. (Reference: Effects on Some Growth Regulators and Dressings on the Healing of Tree Wounds, by W. E. McQuilkin, Northeastern Forest Experiment Station, Kingston, Pa. JOURNAL OF FORESTRY, September 1950. Pages 423-428)